

AD-A123 338 19308B MLRS MISSILE NUMBERS BC-129 BC-122 BC-132 ROUND 1/1

1/1

UNCLASSIFIED

WSMR NM ATM. . D C KELLER NOV 82

D C KELLER NOV 82

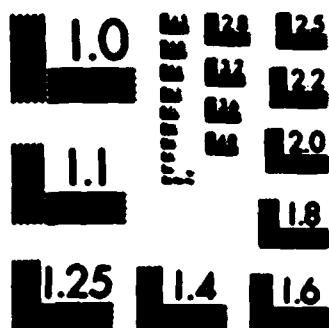
F/G 4/2

NL

END

61,000,000

1488



MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AD A123338

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER DR 1274	2. GOVT ACCESSION NO. AD-A12338	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) 19308B MLRS Missile Numbers BC-129, BC-122, BC-132 Round Numbers V-363/PQ-94, V-364/PQ-95, V-365/PQ-96		5. TYPE OF REPORT & PERIOD COVERED
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17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report) Approved for public release; distribution unlimited.		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of the 19308B MLRS, Missile Numbers BC-129, BC-122, BC-132, Round Numbers V-363/PQ-94, V-364/PQ-95, V-365/PQ-96 are presented in tabular form.		

UNCLASSIFIED

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Accession For		
NTIS GRAB	<input checked="" type="checkbox"/>	
DTIC TAB	<input type="checkbox"/>	
Unannounced	<input type="checkbox"/>	
Justification		
By _____		
Distribution/		
Availability Codes		
Avail and/or		
Dist	Special	
A		

INTRODUCTION

→ 19333 RLRS, Missile numbers SC-129, SC-132 and SC-133, Round Numbers Y-XL3/PQ-31, Y-XL1/PQ-35 and Y-XL5/PQ-36, were launched from Grillo, White Sands Missile Range (WSMR), New Mexico, at 0730:56, 0740:33 and 0749:35 MST, 15 Nov 52. The scheduled launch times were 0730, 0730:30.5 and 0730:00 MST.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands Missile Range, New Mexico. The data were obtained by the following methods:

1. Observations

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}\text{C}$), relative humidity, dew point ($^{\circ}\text{C}$), density (gm/m^3), wind direction and speed, and cloud cover were made at the Grillo Test Site at 1-0 minutes.

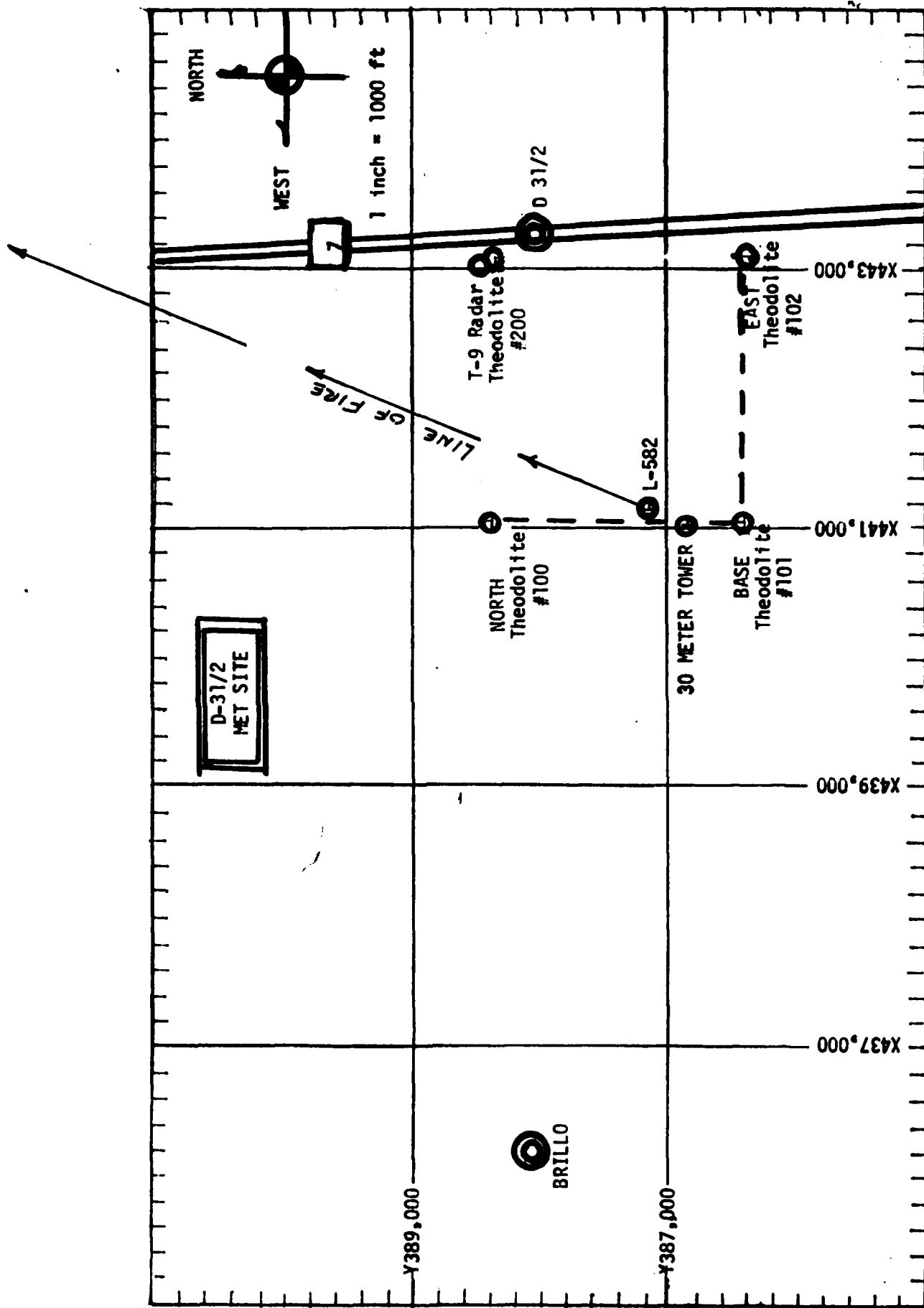
(2) Anemometer data were provided from existing tower-mounted anemometers at Grillo. Monitor of wind speed and direction from one anemometer was also provided in the launch control room.

b. Upper Air - Air structure data (rawinsonde) were collected at the following Test Sites.

SITE AND TIME

E-28	0430 MST
W-31	0530 MST
E-23	0730 MST

A detailed map of the Fort Huachuca area, showing various locations and trails. The map includes labels for 'STATION', 'RED RIVER', 'SALINE PEAK', 'TULA GATE', 'TULA PEAK', 'TULA PICAL CAT', 'MOLLOVON', 'SEENORNO', 'APACHE', 'NICK', 'SPR', 'SPR RKT', 'FLOWER', 'C STATION', 'IONOSPHERE', 'NORTHUP STRIP', 'SALT', 'TULA GATE', 'TULA PEAK', 'TULA PICAL CAT', 'MOLLOVON', 'SEENORNO', 'APACHE', 'NICK', 'SPR', 'SPR RKT', 'FLOWER', 'C STATION', 'IONOSPHERE'. A scale bar at the bottom left indicates 0 to 10 miles.



STATION BRILLO

DATE 15 NOV 32
DAY MONTH YEAR

$$\begin{array}{r} X = 441, 121.6 \\ \hline 441, 121.6 \end{array} \quad \begin{array}{r} Y = 387, 103.8 \\ \hline 387, 107.8 \end{array} \quad \begin{array}{r} H = 4005.2 \\ \hline 4005.2 \end{array}$$
[illegible]

OBSTRUCTIONS TO VISIBILITY	CLOUDS						REMARKS
	1st LAYER		2nd LAYER		3rd LAYER		
	AMT	TYPE	HGT	AMT	TYPE	HGT	
	1	AC	100	5	CI	250	

PSYCHOMETRIC COMPUTATION

PSYCHROMETRIC COMPUTATION			
TIME:	0735		
DRY BULB TEMP.	1.0		
WET BULB TEMP.	-0.7		
WET BULB DEPR.	1.7		
DEW POINT	-13.3		
RELATIVE HUMID.	33		

TABLE 2

Anemometer Data - 30 FT. Level of 30 Meter Tower

X= 441,018.71 Y= 336,349.19 H= 4,004.80 (BASE)

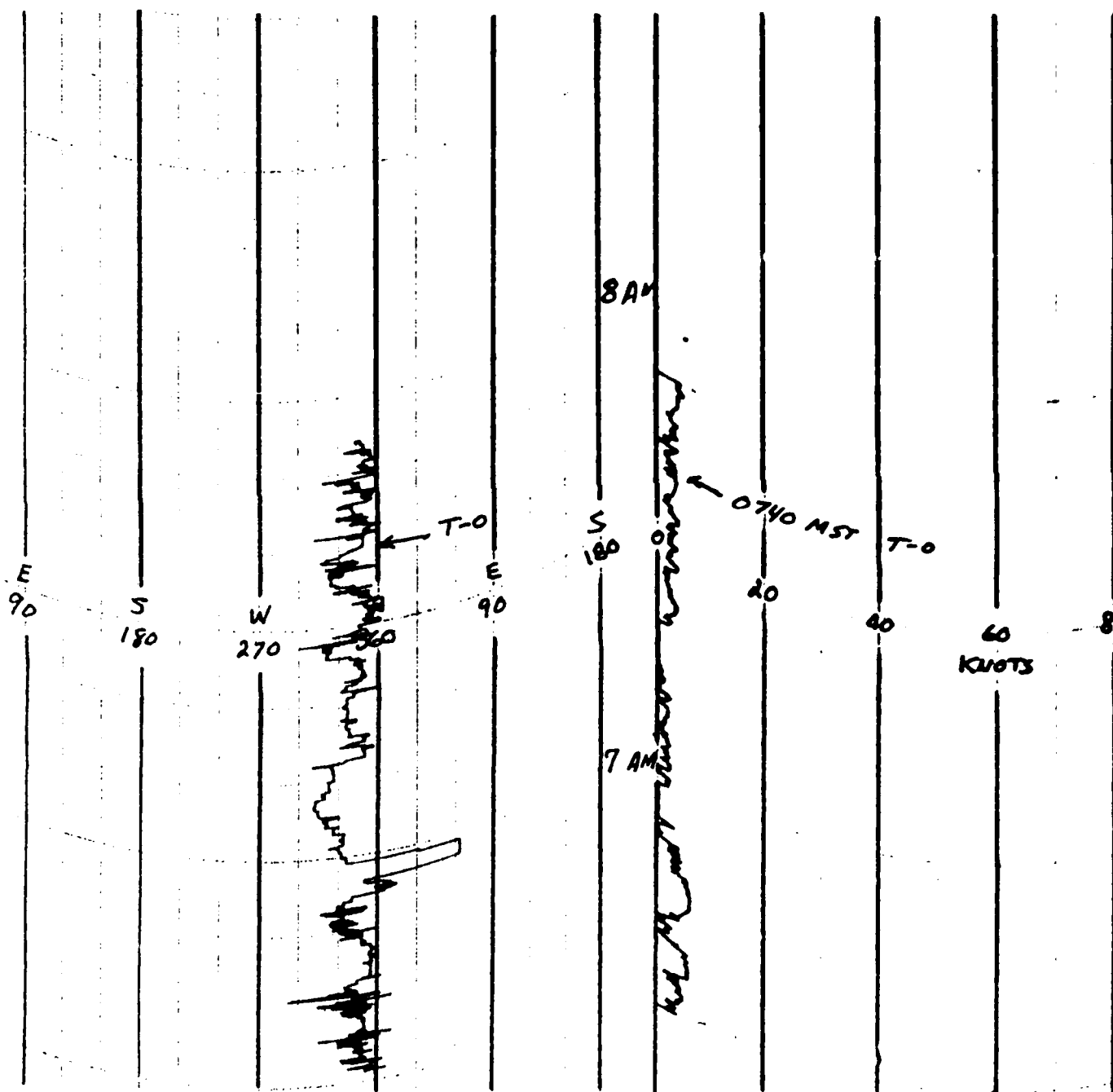


TABLE 3

Approximate position of the ship at the time of the explosion

$\lambda = 141,015$ / $\phi = 31,045$ / $t = 2,016$ / 0101

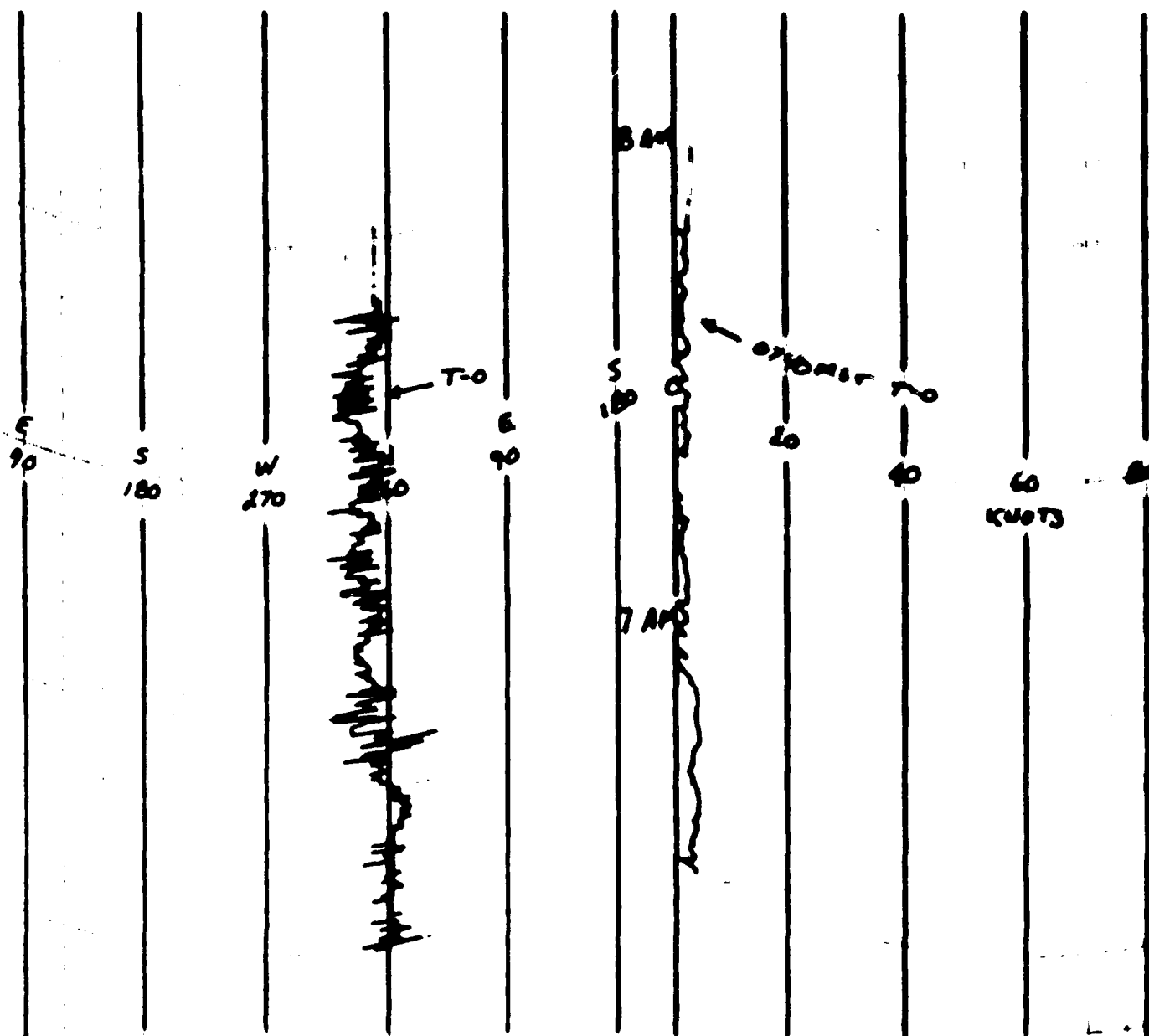
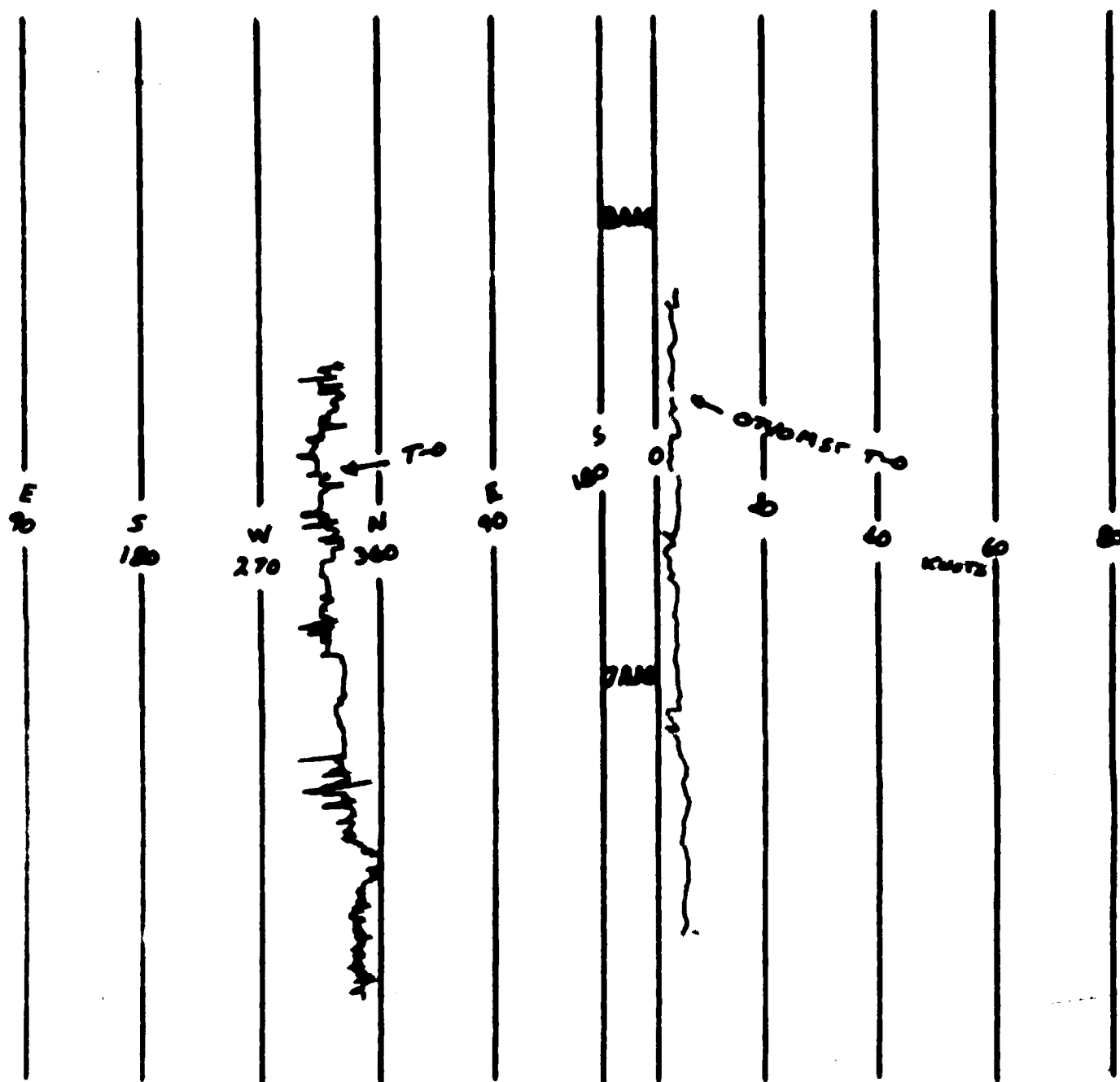


TABLE 4

Anemometer data - 90 ft level of 30 Meter Tower

$\lambda = 441,018.71$ $\phi = 321,349.19$ $h = 4,004.80$ (BASE)



AIMING AND T-TIME COMPUTER MET MESSAGES

15 Nov 82

E-28 0430 MST

METCM1329064

151150119888

00000000 27180888
 01335010 27600877
 02297012 27680851
 03293013 27560810
 04397013 27730761
 05417016 27830716
 06412020 27500673
 07432025 27160633
 08453022 26810594
 09454022 26400557
 10472022 26340522
 11479026 26020484
 12490030 25470443
 13485034 24590387
 14494039 23730336
 15516050 22890290
 16517052 22050249
 17506071 21700213
 18512081 21420182
 19504077 21080155
 20503073 21100132

NW-30 0530 MST

METCM1329065

151250122886

00356001 27640886
 01321012 27730875
 02294012 27600849
 03312013 27570808
 04409013 27800760
 05397020 27840715
 06421023 27490672
 07432028 27120631
 08461023 26780593
 09456026 26440556
 10467026 26310521
 11487029 25960488
 12498035 25410442
 13496040 24570386
 14512050 23710335
 15515056 22840289
 16512061 21940249
 17506086 21730213
 18509094 21390182
 19503095 21030155
 20502083 21050132
 21505072 20890112
 22512069 20840095
 23468048 20880081
 24477024 20670069
 25500025 21060058
 26513027 21320050

E-28 0730 MST

METCM1329064

151450119888

00000000 27200888
 01330004 27450877
 02304006 27560850
 03294011 27540809
 04385010 27810761
 05415022 27900716
 06434022 27530673
 07437024 27220673
 08461022 26830694
 09465024 26540557
 10468023 26400522
 11493023 26110490
 12489025 25500443
 13498032 24710387
 14499034 23860336
 15481042 22990291
 16486043 22180250
 17499069 21830214
 18510080 21530183
 19508078 21210156
 20500068 21030133
 21510067 20950113
 22492055 20880096
 23472053 20940082
 24518034 21040070
 25493033 21100059
 26508029 21260051

STATION ALTITUDE 3912.75 FEET
 15 NOV. 72 0430 HRS PST
 ABSCISSA NO. 104

SIGNIFICANT LEVEL DATA
 3190290104
 EAST-20/CUMHBT

GEODETIC COORDINATES
 32.09927 LAT N
 130.40391 LONG W

TABLE 6

PRESSURE CORRECTED ALTITUDE WILLIAMS WGL FET	TEMPERATURE AIR DEWPOINT SURFACE CENTIGRADE	RELATIVE HUMIDITY
301.3	-1.0	65.0
302.3	2.3	61.0
303.3	3.4	53.0
304.3	3.3	41.0
305.3	1.3	42.0
306.3	-10.2	43.0
307.3	-4.6	44.0
308.3	-2.2	46.0
309.3	-5.2	43.0
310.3	-0.0	32.0
311.3	-1.9	67.0
312.3	-2.2	77.0
313.3	-0.5	74.0
314.3	-10.3	34.0
315.3	-15.0	33.0
316.3	-0.9	33.0
317.3	-11.0	38.0
318.3	-10.1	42.0
319.3	-17.0	51.0
320.3	-27.0	43.0
321.3	-31.4	14.0
322.3	-30.4	14.0
323.3	-31.3	14.0
324.3	-34.1	19.0
325.3	-41.4	19.0
326.3	-44.7	41.0
327.3	-45.3	31.0
328.3	-46.3	62.0
329.3	-42.4	
330.3	-42.4	
331.3	-42.6	
332.3	-44.0	
333.3	-45.0	
334.3	-45.7	
335.3	-47.1	
336.3	-48.0	
337.3	-42.7	
338.3	-42.7	
339.3	-42.7	
340.3	-42.7	
341.3	-42.7	
342.3	-42.7	
343.3	-42.7	
344.3	-42.7	
345.3	-42.7	
346.3	-42.7	
347.3	-42.7	
348.3	-42.7	
349.3	-42.7	
350.3	-42.7	
351.3	-42.7	
352.3	-42.7	
353.3	-42.7	
354.3	-42.7	
355.3	-42.7	
356.3	-42.7	
357.3	-42.7	
358.3	-42.7	
359.3	-42.7	
360.3	-42.7	

3012.75 FEET (50
 0430 WGS, 451
 1000
 1000

WHEEL? ALL WHEELS
3102, 1104
CAST-20/1104

OFFICIAL COMMUNITIES
52-09927 LA 146
130-09059 LA 146

TABLE 7

COUNTRY	CITY	POPULATION (MILLIONS)	AIR CRAFTS	TEMPERATURE (°C)	RELATIVE HUMIDITY PERCENT	ECONOMIC DATA		SOCIAL DATA		INDEX OR REFERENCE
						GDP (BILLION \$)	PER CAPITA	UNEMPLOYMENT RATE (%)	POPULATION GROWTH (%)	
USA	NEW YORK	18.0	1200	15.0	65.0	1137.9	642.5	0.0	0.0	1.000272
	LOS ANGELES	13.0	900	18.0	63.0	1120.0	644.0	0.0	0.0	1.000271
USA	CHICAGO	10.0	700	16.0	62.7	1092.0	640.0	4.3	4.3	1.000263
	HONOLULU	0.5	30	25.0	62.3	1072.9	640.2	7.9	7.9	1.000255
USA	PHOENIX	0.5	20	20.0	61.2	1054.0	647.7	10.5	10.5	1.000250
	DALLAS	0.5	20	20.0	61.0	1040.7	647.1	12.5	12.5	1.000240
USA	HOUSTON	0.5	20	20.0	61.7	1015.1	640.0	11.0	11.0	1.000242
	PORTLAND	0.5	20	10.0	61.4	1001.9	640.0	10.9	10.9	1.000237
USA	SEATTLE	0.5	20	10.0	62.0	990.4	640.9	11.1	11.1	1.000234
	MINNEAPOLIS	0.5	20	10.0	62.0	987.5	640.5	13.0	13.0	1.000230
USA	DETROIT	0.5	20	10.0	62.0	982.5	641.1	12.4	12.4	1.000233
	BOSTON	0.5	20	10.0	62.0	915.0	651.0	16.0	16.0	1.000225
USA	WASHINGTON	0.5	20	10.0	60.3	900.7	650.2	16.7	16.7	1.000222
	PHILADELPHIA	0.5	20	10.0	59.4	880.1	649.4	17.5	17.5	1.000221
USA	ATLANTA	0.5	20	10.0	62.4	872.4	640.4	10.5	10.5	1.000221
	MEMPHIS	0.5	20	10.0	70.5	859.0	647.1	19.7	19.7	1.000214
USA	INDIANAPOLIS	0.5	20	10.0	75.7	847.7	645.5	21.0	21.0	1.000213
	KANSAS CITY	0.5	20	10.0	64.6	835.0	645.9	22.5	22.5	1.000217
USA	ST. LOUIS	0.5	20	10.0	51.2	824.0	643.0	23.5	23.5	1.000199
	ST. PAUL	0.5	20	10.0	34.2	809.2	642.1	23.9	23.9	1.000194
USA	NEW ORLEANS	0.5	20	10.0	51.7	797.7	640.5	23.0	23.0	1.000191
	ALBUQUERQUE	0.5	20	10.0	72.3	780.7	635.0	22.5	22.5	1.000192
USA	EL PASO	0.5	20	10.0	55.4	772.2	630.0	22.0	22.0	1.000184
	FAIRFAX	0.5	20	10.0	63.4	761.2	637.0	21.0	21.0	1.000179
USA	IRVING	0.5	20	10.0	66.9	749.0	635.2	21.9	21.9	1.000170
	HOVER	0.5	20	10.0	69.0	740.2	633.0	22.1	22.1	1.000173
USA	CHICAGO	0.5	20	10.0	37.4	730.5	631.4	22.1	22.1	1.000168
	NEW YORK	0.5	20	10.0	14.0	710.4	634.0	22.3	22.3	1.000161
USA	NEW YORK	0.5	20	10.0	14.9	690.4	633.1	22.5	22.5	1.000156
	NEW YORK	0.5	20	10.0	16.0	647.4	631.9	23.1	23.1	1.000150
USA	NEW YORK	0.5	20	10.0	17.0	670.0	630.7	24.2	24.2	1.000153
	NEW YORK	0.5	20	10.0	14.0	640.0	629.4	23.1	23.1	1.000151
USA	NEW YORK	0.5	20	10.0	14.5	635.1	620.3	25.9	25.9	1.000144
	NEW YORK	0.5	20	10.0	14.5	644.4	627.2	26.7	26.7	1.000144
USA	NEW YORK	0.5	20	10.0	14.0	635.9	625.1	27.0	27.0	1.000143
	NEW YORK	0.5	20	10.0	19.0	623.0	624.9	26.4	26.4	1.000141
USA	NEW YORK	0.5	20	10.0	19.0	614.1	623.3	24.3	24.3	1.000139
	NEW YORK	0.5	20	10.0	19.0	604.0	621.7	30.3	30.3	1.000130
USA	NEW YORK	0.5	20	10.0	19.0	595.7	620.4	31.1	31.1	1.000124
	NEW YORK	0.5	20	10.0	19.0	586.7	619.4	31.7	31.7	1.000132

STATION ALTITUDE 3912.75 FEET MSL
15 NOV. 12
ASTATION NO. 164

OFFER AIR DATA
1100290104
1 AST-20/CHLAPY

GEOMETRIC COORDINATES
32-09'27" LAT DEG
136-40'59" LONG DEG

TABLE 7

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (DEGREES (IN))	SPEED KNOTS	INDEX OF REFRACTION
23500.0	415.7	-22.6	19.0	577.9	610.7	271.7	32.7	1.000130
24000.0	407.2	-23.9	19.0	569.2	615.1	270.7	33.0	1.000128
24500.0	398.0	-25.3	19.1	560.0	613.4	271.0	33.5	1.000126
25000.0	390.6	-26.6	19.5	551.6	611.7	272.7	33.4	1.000124
25500.0	382.4	-28.0	19.9	543.2	610.1	274.2	33.1	1.000122
26000.0	374.5	-29.3	20.3	534.7	608.4	274.9	33.5	1.000120
26500.0	366.5	-30.6	20.7	526.4	606.7	275.0	33.9	1.000118
27000.0	358.0	-32.0	21.6	518.2	605.1	275.5	34.9	1.000116
27500.0	351.1	-33.1	26.5	509.5	603.0	275.6	36.0	1.000114
28000.0	343.6	-34.3	31.8	501.1	602.1	276.4	37.2	1.000112
28500.0	335.2	-35.8	44.5	493.5	600.5	277.5	38.4	1.000111
29000.0	326.0	-37.2	57.2	485.0	599.4	279.0	40.0	1.000109
29500.0	317.7	-38.6	51.8**	477.7	598.7	280.0	41.6	1.000107
30000.0	314.6	-39.8	35.3**	469.7	595.1	282.4	43.8	1.000105
30500.0	307.7	-41.1	18.8**	461.9	593.5	284.4	45.4	1.000103
31000.0	300.0	-42.3	2.3**	454.2	591.9	287.1	47.8	1.000101
31500.0	294.1	-43.6		446.4	590.5	289.5	49.6	1.000099
32000.0	287.5	-44.9		438.7	588.0	291.5	51.5	1.000098
32500.0	280.0	-46.1		431.1	587.0	292.7	53.1	1.000096
33000.0	274.5	-47.4		423.7	585.5	292.4	53.4	1.000094
33500.0	268.3	-48.7		416.4	583.7	292.0	55.6	1.000093
34000.0	262.2	-50.0		409.3	582.0	292.1	52.5	1.000091
34500.0	256.3	-51.2		402.3	580.4	292.1	51.4	1.000090
35000.0	250.4	-52.5		395.4	578.7	291.7	51.1	1.000088
35500.0	244.6	-53.8		388.4	577.0	291.3	51.1	1.000087
36000.0	238.9	-55.1		381.6	575.5	289.5	53.8	1.000085
36500.0	233.5	-55.9		374.0	574.3	288.0	56.6	1.000083
37000.0	227.8	-55.7		364.9	574.4	288.4	61.5	1.000081
37500.0	222.4	-55.6		356.1	574.0	285.0	66.4	1.000079
38000.0	217.2	-55.6		347.7	574.0	284.7	70.5	1.000077
38500.0	212.0	-56.0		340.2	574.1	284.0	74.6	1.000076
39000.0	207.0	-56.5		332.8	573.5	285.0	77.0	1.000074
39500.0	202.1	-56.9		325.6	572.9	285.0	78.7	1.000073
40000.0	197.4	-57.3		318.5	572.4	285.2	79.9	1.000071
40500.0	192.7	-57.6		311.3	572.0	286.6	80.4	1.000069
41000.0	188.1	-57.9		304.4	571.0	287.0	80.9	1.000068
41500.0	183.6	-58.5		297.0	570.8	287.0	80.2	1.000066
42000.0	179.2	-59.3		291.9	569.7	287.5	79.4	1.000065
42500.0	174.9	-60.1		285.9	568.6	287.4	77.6	1.000064
43000.0	170.7	-60.9		280.1	567.0	288.5	75.1	1.000062

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 5912.75 FEET MSL
 15 NOV. 52 9436 HRC MSL
 ASCENDING NO. 104

UPPER AIR DATA
 3190290164
 EAST-20/CULRY

GEODETIC COORDINATES
 32-5927 LAT DEG
 136-40591 LONG DEG

TABLE 7

Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
43500.0	160.6	-61.7		274.4	560.5	285.5	73.6	1.000061
44000.0	162.6	-62.5		260.8	563.4	284.5	74.7	1.000060
44500.0	160.6	-62.6		262.4	565.5	285.5	75.8	1.000058
45000.0	154.8	-62.6		250.1	565.5	282.9	77.4	1.000057
45500.0	151.0	-62.7		249.9	565.2	282.5	79.1	1.000056
46000.0	147.5	-62.4		245.0	565.5	282.2	79.8	1.000054
46500.0	143.8	-62.1		237.5	565.9	282.1	77.8	1.000053
47000.0	140.5	-62.0		231.4	566.1	282.0	75.8	1.000052
47500.0	136.9	-61.8		225.0	566.3	282.5	73.9	1.000050
48000.0	133.6	-61.7		220.0	566.6	283.5	72.1	1.000049
48500.0	130.5	-62.0		215.0	566.1	284.1	70.4	1.000048
49000.0	127.2	-62.6		210.4	565.5	285.0	69.7	1.000047
49500.0	124.1	-62.9		205.6	564.8	285.6	69.0	1.000046
50000.0	121.1	-62.2		199.9	565.9			1.000045
50500.0	118.1	-61.8		194.7	566.4			1.000043
51000.0	115.3	-62.4		190.5	565.0			1.000042
51500.0	112.5	-63.0		186.4	564.0			1.000042
52000.0	109.7	-63.6		182.4	563.4			1.000041
52500.0	107.1	-64.2		178.5	563.1			1.000040

STATION ALTITUDE 3012.75 FEET MSL
 15 NOV. 62
 ASCENSION NO. 104

MANDATORY LEVELS
 3190290164
 EAST-20/CHEMRY

GEODETIC COORDINATES
 32.69027 LAT DEG
 136.40591 LONG DEG

TABLE 8

PRESSURE (POPOINTEL) MILLIBARS	FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA		
		AIR DEGREES CENTIGRADE	DEWPOINT CENTIGRADE		DIRECTION DEGREES(TN)	SPEED KNOTS	
850.0	5081.	3.3	-8.7	41.	165.0	6.5	
800.0	6689.	1.7	-9.8	42.	172.0	11.4	
750.0	8402.	4.8	-4.5	51.	220.3	15.1	
700.0	10249.	3.6	-1.9	67.	230.7	16.0	
650.0	12209.	-8.	-7.4	61.	239.1	25.2	
600.0	14272.	-4.8	-10.0	65.	255.9	22.1	
550.0	16517.	-10.0	-22.9	36.	250.1	25.0	
500.0	18926.	-12.1	-31.5	16.	268.9	29.5	
450.0	21545.	-17.4	-35.4	19.	270.9	35.5	
400.0	24307.	-25.1	-41.9	19.	271.5	36.1	
350.0	27526.	-33.3	-45.7	27.	275.7	48.0	
300.0	31010.	-42.5			287.4	51.1	
250.0	34963.	-52.6			291.7	79.3	
200.0	39629.	-57.1			265.9	77.7	
175.0	42387.	-60.1			287.5	79.5	
150.0	45515.	-62.7			282.4	69.3	
125.0	49212.	-63.0			285.5		

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.00 FEET MSL
15 NOV. 92
ACQUISITION NO. 32

SIGNIFICANT LEVEL DATA
3190220032
NW 30
TABLE 9

GEODETIC COORDINATES
32-08497 LAT DEG
100-49714 LONG DEG

PRESSURE GEOMETRIC		TEMPERATURE		REL. HUM. PERCENT
MILLIBARS	ALTITUDE MSL FEET	AIR DEGREES	DEWPOINT CENTIGRADE	
886.3	4010.4	2.7	-8.3	44.0
876.5	4306.7	4.4	-8.6	38.0
850.0	5124.1	2.2	-10.0	38.0
800.5	6714.8	2.0	-10.5	34.0
753.9	8135.1	4.1	-7.6	42.0
740.2	8479.0	5.5	-4.1	50.0
720.4	9199.9	5.7	-3.4	52.0
715.6	9712.7	4.7	-5.0	47.0
700.0	10302.3	3.6	-2.5	65.0
661.7	11795.3	.0	-4.4	72.0
651.0	12143.7	-4.4	-10.3	47.0
615.2	13702.0	-4.0	-6.4	60.0
606.7	14062.9	-4.3	-12.4	53.0
580.5	14906.3	-5.7	-16.0	41.0
556.7	16369.1	-10.3	-22.0	35.0
550.8	16539.1	-10.1	-24.7	24.0
547.0	16715.3	-7.9	-30.0	14.0
544.5	16832.4	-7.0	-30.4	14.0
509.0	18993.8	-12.4	-33.0	15.0
448.9	21673.3	-18.0	-37.0	17.0
400.0	24468.7	-25.3	-43.1	17.0
348.0	27730.9	-34.1	-42.0	44.0
310.2	30351.1	-40.6		
306.0	31097.0	-42.5		
250.0	35054.3	-53.8		
236.3	36231.4	-54.6		
230.1	36793.0	-55.1		
200.0	39737.1	-56.4		
161.5	44144.6	-62.8		
150.0	45442.8	-63.4		
131.5	48004.0	-62.4		
127.1	49407.2	-63.2		
123.3	49424.7	-61.0		
107.4	52044.2	-65.3		
100.0	53351.6	-63.1		
80.0	58153.1	-63.8		
73.6	60032.0	-64.0		
70.0	61030.1	-64.2		
64.1	62793.4	-67.4		
34.4	66084.6	-59.0		

STATION ALTITUDE 4010.40 FEET MSL
 15 NOV. 62
 ASCENSION NO. 32

SIGNIFICANT LEVEL DATA
 3190220032
 HW 30

GEODETIC COORDINATES
 32-00-47 LAT DEG
 106-49-14 LONG DEG

TABLE 9

CONT'D
 TEMPERATURE
 AIR DEWPOINT
 DEGREES CENTIGRADE

PRESSURE GEOMETRIC

ALTITUDE
 MILLIBARS (SL FEET)

REL. HUM.
 PERCENT

50.0	67071.4	-50.7
45.6	70030.9	-61.5
41.0	71506.6	-50.9
37.1	74050.5	-53.6
32.4	76661.7	-55.4
30.7	78050.2	-55.1

STATION ALTITUDE 4010.0 FEET ASL
 15 DEGR. 42'
 MAGNETIC NO. 52

UPPER AIR DATA
 319020032
 110 30

GEOLYTIC COORDINATES
 32-00497 LAT DEG
 100-49714 LONG DEG

TABLE 10

GEOLYTIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GRAMS PER CUBIC METER	WIND DIRECTION DEGREES TRUE	WIND SPEED KNOTS	INDEX OF REFRACTION
4010.0	880.3	2.7	44.0	1117.7	047.5	1.0	1.000205
4500.0	870.2	3.9	38.0	1092.0	048.9	4.4	1.000259
5000.0	854.0	2.5	30.0	1077.0	047.2	8.0	1.000254
5500.0	836.0	2.2	34.2	1059.1	040.8	11.6	1.000250
6000.0	822.4	2.1	34.6	1039.0	040.7	12.9	1.000245
6500.0	807.6	2.0	34.9	1020.3	040.7	12.5	1.000241
7000.0	792.0	2.4	39.6	999.6	047.2	11.0	1.000237
7500.0	777.2	3.2	40.7	976.4	040.1	10.6	1.000233
8000.0	762.8	3.9	41.7	957.5	049.0	12.6	1.000230
8500.0	748.6	5.5	50.1	933.8	051.1	15.6	1.000230
9000.0	734.8	5.6	51.4	916.0	051.3	18.8	1.000227
9500.0	721.3	5.1	49.1	901.0	050.0	20.0	1.000222
10000.0	706.0	4.2	55.8	887.2	049.0	21.0	1.000220
10500.0	694.8	3.1	65.9	873.7	040.4	21.8	1.000220
11000.0	681.0	1.9	68.3	861.2	047.0	22.5	1.000210
11500.0	669.1	.7	70.6	840.9	045.5	22.7	1.000212
12000.0	650.6	-2	57.3	830.4	044.2	23.3	1.000204
12500.0	644.2	-1.2	54.5	823.0	043.0	24.3	1.000199
13000.0	631.9	-2.4	65.1	811.4	041.7	25.4	1.000194
13500.0	620.0	-3.5	75.7	799.3	040.4	26.6	1.000197
14000.0	608.2	-4.2	57.7	780.6	039.4	25.6	1.000189
14500.0	596.5	-5.1	45.9	774.4	030.2	24.5	1.000183
15000.0	585.6	-6.3	40.2	763.0	030.7	23.9	1.000174
15500.0	573.7	-7.9	38.2	752.0	034.8	23.7	1.000175
16000.0	562.6	-9.5	36.1	742.7	032.9	24.6	1.000171
16500.0	551.7	-10.1	29.9	730.2	032.0	25.0	1.000167
17000.0	540.9	-8.0	14.1	710.4	034.5	25.1	1.000161
17500.0	530.3	-9.1	14.3	694.4	033.2	25.5	1.000158
18000.0	520.0	-10.2	14.5	680.7	031.6	25.7	1.000150
18500.0	509.4	-11.3	14.8	678.1	030.5	27.0	1.000153
19000.0	499.4	-12.4	15.0	667.7	029.1	26.3	1.000151
19500.0	489.9	-13.5	15.4	657.0	027.9	30.1	1.000148
20000.0	480.2	-14.5	15.8	640.6	020.6	31.9	1.000146
20500.0	470.6	-15.5	16.1	636.3	025.3	33.7	1.000143
21000.0	461.2	-16.6	16.5	626.1	024.1	34.3	1.000141
21500.0	452.0	-17.6	16.9	610.2	022.8	34.8	1.000139
22000.0	442.0	-18.9	17.0	606.6	021.3	35.0	1.000130
22500.0	433.8	-20.2	17.0	597.3	019.7	35.1	1.000134
23000.0	425.0	-21.5	17.0	588.1	010.1	35.2	1.000132
23500.0	416.3	-22.8	17.0	579.1	010.5	35.5	1.000130

STATION ALTITUDE 4010.00 FT, 1 ASL
15 NOV. 42 0530 HRS, MST
ASCENSION NO. 32

UPPER AIR DATA
3190220032
1W 30

TABLE 10
Cont'd

GEOMETRIC COORDINATES
32°00'49" LAT DEG
106°49'14" LONG DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM./CM ³ METER	SPEED OF SOUND KNOTS	DIRECTION DEGREES (IN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	407.0	-24.1	17.0	570.3	614.9	270.7	36.2	1.000128
24500.0	399.5	-25.4	17.3	561.6	613.3	270.9	37.0	1.000126
25000.0	391.0	-26.7	21.4	552.7	611.0	277.7	38.1	1.000124
25500.0	382.8	-28.1	25.5	544.1	609.9	274.2	40.3	1.000122
26000.0	374.7	-29.4	29.7	535.5	608.2	280.6	42.7	1.000120
26500.0	366.8	-30.8	33.8	527.2	606.0	281.7	44.3	1.000118
27000.0	359.1	-32.1	37.9	518.9	604.9	282.8	45.7	1.000117
27500.0	351.5	-33.5	42.0	510.6	603.2	284.5	46.3	1.000115
28000.0	344.0	-34.8	39.6**	502.0	601.0	286.1	47.5	1.000113
28500.0	336.5	-36.0	31.2**	494.3	600.0	287.7	49.5	1.000111
29000.0	329.2	-37.2	22.7**	486.0	598.4	289.6	51.6	1.000109
29500.0	322.0	-38.5	14.3**	478.0	596.0	292.5	53.8	1.000107
30000.0	315.0	-39.7	5.9**	470.1	593.2	293.9	55.3	1.000105
30500.0	308.1	-41.0		462.4	593.6	294.2	56.2	1.000103
31000.0	301.3	-42.3		454.0	592.0	294.6	57.0	1.000101
31500.0	294.5	-43.6		447.0	590.2	295.7	57.8	1.000100
32000.0	287.8	-45.1		439.0	588.3	292.9	57.3	1.000098
32500.0	281.2	-46.5		432.3	586.5	287.9	56.4	1.000096
33000.0	274.8	-47.9		425.1	584.7	284.2	56.1	1.000095
33500.0	268.0	-49.4		418.1	582.8	281.1	56.0	1.000093
34000.0	262.4	-50.8		411.2	580.9	281.0	57.0	1.000092
34500.0	256.5	-52.2		404.4	579.1	285.0	59.3	1.000090
35000.0	250.6	-53.6		397.8	577.2	288.1	61.1	1.000089
35500.0	244.8	-54.9		390.7	575.5	288.0	61.6	1.000087
36000.0	239.0	-56.2		383.8	573.8	287.4	62.3	1.000085
36500.0	233.4	-56.0		374.4	574.1	285.7	63.6	1.000083
37000.0	227.9	-55.2		364.2	575.2	284.2	67.5	1.000081
37500.0	222.5	-55.4		350.0	574.9	283.1	76.9	1.000079
38000.0	217.3	-55.6		340.0	574.6	283.4	84.9	1.000078
38500.0	212.1	-55.9		340.1	574.3	284.0	91.6	1.000076
39000.0	207.2	-55.1		332.4	574.0	285.9	94.0	1.000074
39500.0	202.3	-56.3		324.9	573.7	287.2	94.9	1.000072
40000.0	197.5	-56.8		317.9	573.0	287.5	95.5	1.000071
40500.0	192.7	-57.5		311.4	572.1	287.5	96.2	1.000069
41000.0	188.1	-58.2		304.9	571.1	286.9	95.6	1.000068
41500.0	183.6	-59.0		298.0	570.2	286.1	94.7	1.000067
42000.0	179.2	-59.7		292.5	569.2	285.4	93.3	1.000065
42500.0	174.9	-60.4		286.4	568.2	284.6	91.6	1.000064
43000.0	170.7	-61.1		280.5	567.3	284.0	90.7	1.000062
43500.0	166.6	-61.9		274.7	566.3	283.0	90.4	1.000061

** AT LAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4010.00 FEET MSL
15 NOV. 52 0530 HRS MST
AUGUSTINE NO. 32

UPPER AIR DATA
3190220052
NW 30

GEODETIC COORDINATES
32.88497 LAT DEG
106.49714 LONG DEG

TABLE 10

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION SPEED KNOTS	INDEX OF REFRACTION
40000.0	162.6	-62.6		269.1	565.3	283.3	1.000060
44500.0	150.7	-72.9		263.0	564.8	283.2	1.000059
45000.0	154.8	-63.1		250.8	564.6	283.1	1.000057
45500.0	151.1	-63.3		250.8	564.3	282.8	1.000056
46000.0	147.4	-63.2		244.6	564.4	282.4	1.000054
46500.0	143.8	-73.0		238.4	564.7	281.9	1.000053
47000.0	140.3	-72.8		232.4	563.0	281.3	1.000052
47500.0	136.9	-62.6		226.5	563.3	281.3	1.000050
48000.0	133.6	-62.4		220.8	563.6	281.7	1.000049
48500.0	130.3	-62.8		215.8	563.0	282.8	1.000048
49000.0	127.1	-73.2		211.0	564.5	284.6	1.000047
49500.0	124.1	-62.2		204.8	563.9	286.0	1.000046
50000.0	121.0	-62.4		200.1	563.5	287.1	1.000045
50500.0	118.1	-63.1		195.9	564.0	287.3	1.000044
51000.0	115.2	-63.8		191.7	563.6	285.4	1.000043
51500.0	112.4	-64.5		187.7	562.7	283.3	1.000042
52000.0	109.7	-65.2		183.7	561.7	280.4	1.000041
52500.0	107.0	-65.2		179.2	561.7	277.3	1.000040
53000.0	104.3	-65.2		174.8	561.8	276.7	1.000039
53500.0	101.8	-65.1		170.4	561.9	276.0	1.000038
54000.0	99.3	-65.1		166.2	562.0	276.5	1.000037
54500.0	96.8	-64.9		162.0	562.2	277.2	1.000036
55000.0	94.5	-64.8		157.9	562.4	277.7	1.000035
55500.0	92.2	-64.6		154.0	562.6	278.2	1.000034
56000.0	89.9	-64.5		150.1	562.8	278.6	1.000033
56500.0	87.7	-64.3		146.3	563.0	279.2	1.000033
57000.0	85.5	-64.2		142.6	563.2	279.8	1.000032
57500.0	83.5	-64.0		139.0	563.3	280.5	1.000031
58000.0	81.4	-63.9		135.5	563.5	281.4	1.000030
58500.0	79.4	-64.0		132.3	563.4	280.7	1.000029
59000.0	77.5	-64.6		129.4	562.5	279.6	1.000029
59500.0	75.6	-65.3		126.7	561.7	277.4	1.000028
60000.0	73.7	-66.0		123.9	560.8	274.3	1.000028
60500.0	71.6	-66.1		121.0	560.6	271.8	1.000027
61000.0	70.1	-66.2		118.0	560.4	271.3	1.000026
61500.0	68.4	-66.5		115.3	560.0	270.9	1.000026
62000.0	66.7	-66.9		112.6	559.5	271.9	1.000025
62500.0	65.0	-67.2		110.0	559.1	273.0	1.000024
63000.0	63.5	-68.9		107.2	559.3	274.1	1.000024
63500.0	61.7	-65.6		103.9	561.3	275.1	1.000023

STATION ALTITUDE 4010.40 FEET MSL
 15 DEC 70 0550 HRS MST
 ASCENDING NO. 32

UPPER AIR DATA
 3100220032
 10W 30

GEOMETRIC COORDINATES
 32.88497 LAT DEG
 106.49714 LON DEG

TABLE 10

GEOMETRIC ALTITUDE	PRESSURE	TEMPERATURE AIR	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND		WIND DATA DIRECTION (IN) SPEED (KNOTS)	INDEX OF REFRACTION
					METER	KNOTS		
6000.0	60.4	-54.3		100.8	363.0		277.1	1.000022
6500.0	53.9	-63.0		97.7	364.7		279.7	1.000022
6500.0	57.5	-61.8		94.8	360.4		282.2	1.000021
6500.0	50.1	-60.5		91.9	360.1		284.6	1.000020
6000.0	54.7	-59.2		89.1	369.3		286.9	1.000020
6500.0	53.4	-59.2		87.0	369.9		287.3	1.000019
6700.0	52.2	-59.4		85.0	369.6		287.7	1.000019
6700.0	50.9	-59.6		83.0	369.4		288.2	1.000018
6000.0	49.7	-59.8		81.1	369.0		288.8	1.000018
6500.0	48.5	-60.2		79.3	368.5		289.5	1.000018
6900.0	47.3	-60.6		77.0	367.9		290.4	1.000017
6700.0	46.2	-61.1		75.9	367.4		291.5	1.000017
7000.0	45.1	-61.5		74.2	366.8		292.0	1.000017
7000.0	44.0	-61.8		72.5	367.4		292.5	1.000016
7100.0	42.9	-60.5		70.3	366.2		293.0	1.000016
7100.0	41.9	-59.9		68.5	368.9		293.5	1.000015
7200.0	40.9	-58.7		66.5	370.5		294.1	1.000015
7200.0	40.0	-57.5		64.6	372.1		294.9	1.000014
7300.0	39.0	-56.3		62.7	373.7		295.6	1.000014
7300.0	38.1	-55.1		60.9	375.2		297.0	1.000014
7400.0	37.2	-53.9		59.1	376.8		298.6	1.000013
7400.0	36.3	-54.1		57.8	376.6		300.8	1.000013
7500.0	35.5	-54.4		56.5	376.2		311.7	1.000013
7500.0	34.7	-54.7		55.3	375.8		18.6	1.000012
7600.0	33.8	-55.0		54.0	375.4		83.3	1.000012
7600.0	33.1	-55.3		52.9	375.0		91.1	1.000012
7700.0	32.3	-55.3		51.8	375.0		88.0	1.000011
7700.0	31.5	-55.2		50.4	375.1			1.000011
7800.0	30.8	-55.1		49.2	375.3			1.000011

STATION ALTITUDE 4010.40 FEET HGL
 15 DEG. 22' 05.30" N
 106.49714 E

WIND DIRECTION
 310020032
 NW 30

GEODETIC COORDINATES
 32.00097 LAT DEG
 106.49714 LONG DEG

TABLE 11

PRESSURE	GEOPOTENTIAL	TEMPERATURE	REL. HUM.	WIND DATA	
MILLIBARS	FEET	AIR DEGREES CENTIGRADE	PERCENT	DIRECTION DEGREES (TN)	SPEED KNOTS
850.0	5121.	2.2	30.	100.2	0.0
800.0	6726.	2.0	39.	179.9	11.8
750.0	8444.	5.4	49.	229.3	15.2
700.0	10203.	3.6	65.	227.5	21.5
650.0	12252.	-7.7	50.	242.0	23.8
600.0	14334.	-4.8	40.	254.0	24.0
550.0	16455.	-9.6	20.	260.1	25.0
500.0	18968.	-12.4	15.	267.5	20.3
450.0	21581.	-17.9	17.	281.1	34.9
400.0	24429.	-25.3	17.	270.8	37.0
350.0	27556.	-33.7	43.	284.8	40.4
300.0	31037.	-42.5		295.0	57.1
250.0	34980.	-53.8		280.1	61.1
200.0	39603.	-56.4		287.5	95.2
175.0	42309.	-60.4		284.0	74.6
150.0	45522.	-63.4		282.7	93.9
125.0	49207.	-62.5		285.7	83.4
100.0	53688.	-65.1		270.2	65.9
80.0	58164.	-63.8		281.1	41.5
70.0	60830.	-66.2		271.5	34.5
60.0	63894.	-64.0		277.0	33.0
50.0	67620.	-59.7		286.8	28.5
40.0	72186.	-57.6		294.8	19.8

STATION ALTITUDE 3912.75 FEET MSL
 15 100% R2
 ASCENDING 100. 105

SIGNIFICANT LEVEL DATA
 1100250105
 1451-26/000000

GEODETIC COORDINATES
 32°09'27" LAT N
 130°40'29" LONG W

TABLE 12

PRESSURE OF OBTAIN MILLIBARS	ALTITUDE MSL FEET	TEMPERATURE		WIND DIRECTION
		AIR DEGREES	DEW POINT CENTIGRADE	
640.2	3912.7	-1.5	-0.1	71.0
675.4	4295.0	1.4	-0.2	47.0
656.6	5075.4	2.2	-0.7	41.0
667.8	6423.0	1.3	-10.6	42.0
775.2	7510.1	3.9	-9.4	37.0
757.1	8148.0	3.0	-6.1	41.0
747.5	8491.0	6.0	-5.6	43.0
712.3	9788.5	5.4	-1.5	61.0
700.0	10255.0	3.8	-2.0	64.0
674.6	11082.0	1.0	-3.1	71.0
662.0	11701.4	.6	-5.2	65.0
652.0	12102.5	.3	-9.8	48.0
634.1	12070.4	-1.6	-7.1	64.0
630.3	13027.7	-1.4	-9.0	50.0
624.5	13767.6	-1.0	-10.0	51.0
611.1	13465.8	-2.5	-10.0	30.0
590.2	16104.3	-9.7	-17.7	52.0
584.7	16120.0	-7.1	-18.0	40.0
557.1	16885.4	-6.6	-24.0	14.0
560.0	16060.3	-11.3	-32.7	12.0
492.0	19120.7	-11.6	-33.7	14.0
410.2	23050.0	-23.1	-41.0	10.0
400.0	24061.4	-23.4	-40.0	40.0
304.0	25119.4	-24.5	-35.0	40.0
361.3	24024.0	-20.4	-34.0	33.0
354.0	27293.9	-31.2	-45.0	40.0
324.8	24057.0	-40.2	-47.7	40.0
300.0	31127.0	-41.4		
290.2	32173.4	-44.2		
290.7	34107.0	-43.1		
291.9	35007.3	-53.2		
294.7	36004.6	-53.1		
221.6	37600.2	-40.5		
200.0	39021.7	-55.0		
174.0	42002.0	-54.0		
160.0	46107.2	-60.0		
150.0	45767.0	-62.5		
130.0	47107.0	-61.5		
131.0	48000.5	-62.2		
120.3	50154.6	-63.5		

51601000 ALL111000 5012575 F111 05L
 15 0500 12 0730 0800 05L
 51601000 000 100

51601000 LEVEL 0000
 5160200100
 5160200100

of public coordinates
 5160200100
 5160200100

TABLE 12

CONFIDENTIAL
 ALL INFORMATION CONTAINED
 HEREIN IS UNCLASSIFIED
 DATE 05/01/00 BY 1000

POP SCORE GROUP F111
 ALL111000 05L

100.7	52370.1	-63.7
100.0	53107.9	-65.3
90.7	56501.0	-63.2
75.0	50604.0	-64.2
70.0	61207.0	-62.3
55.0	67722.0	-62.1
50.0	68073.5	-59.7
45.0	70775.0	-50.2
30.0	73077.0	-59.4
35.0	74041.2	-57.0
30.0	75601.0	-55.3
35.3	77101.4	-53.2
30.0	78752.4	-54.0
21.0	80043.2	-53.5
20.0	81303.0	-50.7
15.0	91055.2	-46.5
15.4	92304.0	-47.1
11.1	98026.4	-47.7
10.0	102591.4	-42.4
7.0	110454.1	-38.2
0.1	113401.1	-38.1

060811C COMMUNALITES
32-9927 LAF ALG
136-4011 LOH ALG

ADP FOR ALL DATA
5190290105
EAST-20/CUBERT
TABLE 13

0.0101404 g. $\text{C}_6\text{H}_{10}\text{O}_6$ 0.01275 g. H_2O 0.01
1.5 mV. O_2 0.736 mV. O_2 0.51
0.000101404 g. 0.01275 g. 0.01

E

Geographic Latitude and Elevation	Pressure in Millibars	Air Temperature in Celsius	Relative Humidity Percent	Density		Specific Volume in m³/kg	Speed of Sound in m/s	Wavelength in m	Frequency in Hz
				at Sea Level	at Altitude				
0° 0' 0" N 0 m	1013.25	15.0	50.0	1.225	1.000	0.771	340.3	0.854	119.4
10° 0' 0" N 1000 m	1013.25	5.0	60.0	1.225	0.889	0.854	336.3	0.896	111.5
20° 0' 0" N 2000 m	1013.25	-5.0	70.0	1.225	0.793	0.933	332.3	0.938	103.5
30° 0' 0" N 3000 m	1013.25	-15.0	80.0	1.225	0.702	1.012	328.3	0.983	95.5
40° 0' 0" N 4000 m	1013.25	-25.0	90.0	1.225	0.616	1.091	324.3	1.028	87.5
50° 0' 0" N 5000 m	1013.25	-35.0	100.0	1.225	0.535	1.170	320.3	1.073	79.5
60° 0' 0" N 6000 m	1013.25	-45.0	110.0	1.225	0.459	1.249	316.3	1.118	71.5
70° 0' 0" N 7000 m	1013.25	-55.0	120.0	1.225	0.388	1.328	312.3	1.163	63.5
80° 0' 0" N 8000 m	1013.25	-65.0	130.0	1.225	0.322	1.407	308.3	1.208	55.5
90° 0' 0" N 9000 m	1013.25	-75.0	140.0	1.225	0.261	1.486	304.3	1.253	47.5
100° 0' 0" N 10000 m	1013.25	-85.0	150.0	1.225	0.205	1.565	300.3	1.298	39.5
110° 0' 0" N 11000 m	1013.25	-95.0	160.0	1.225	0.154	1.644	296.3	1.343	31.5
120° 0' 0" N 12000 m	1013.25	-105.0	170.0	1.225	0.108	1.723	292.3	1.388	23.5
130° 0' 0" N 13000 m	1013.25	-115.0	180.0	1.225	0.067	1.802	288.3	1.433	15.5
140° 0' 0" N 14000 m	1013.25	-125.0	190.0	1.225	0.031	1.881	284.3	1.478	7.5
150° 0' 0" N 15000 m	1013.25	-135.0	200.0	1.225	0.009	1.960	280.3	1.523	1.5

STATION ALTITUDE 5912.75 FEET
 15 NOV. 52 0730 HRS EST
 ACCELERATION NO. 105

UNITED AIR DATA
 3100290105
 LAJ-200/000000

GEODETIC COORDINATES
 32-09527 LAT LONG
 130-40591 LONG

TABLE 13
 CONT'D

GEODETIC ALTITUDE FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CELSIUS	RELATIVE HUMIDITY PERCENT	WIND DIRECTION DEGREES	WIND SPEED KNOTS	WIND DIRECTION DEGREES	WIND SPEED KNOTS	WIND DIRECTION DEGREES	WIND SPEED KNOTS
43500.0	410.2	-72.2	15.0	-41.2	57.0	017.2	27.5	27.8	1.000130
43000.0	407.0	-73.3	17.0	-41.4	560.4	015.0	27.0	28.0	1.000128
42500.0	399.0	-74.0	21.1	-40.0	550.3	015.0	27.0	30.5	1.000125
42000.0	391.1	-75.5	35.1	-36.4	550.1	015.1	28.0	32.7	1.000124
41500.0	383.0	-76.0	42.2	-35.8	541.5	011.5	28.1	33.5	1.000122
41000.0	375.0	-77.0	37.2	-37.9	532.5	010.5	28.2	33.6	1.000120
40500.0	367.1	-78.0	32.2	-40.2	523.4	009.0	28.0	32.3	1.000118
40000.0	359.8	-79.3	27.0	-43.1	515.5	007.1	28.1	30.7	1.000116
39500.0	351.7	-79.8	24.6	-45.3	507.0	005.5	28.2	31.4	1.000114
39000.0	344.2	-80.2	26.0	-46.0	499.7	003.5	28.5	32.2	1.000112
38500.0	336.0	-80.0	27.4	-46.8	491.9	001.7	28.1	33.7	1.000110
38000.0	329.0	-80.0	28.0	-47.0	484.2	599.9	28.2	35.2	1.000108
37500.0	322.0	-80.4	22.0	-50.0	476.5	590.2	27.0	36.0	1.000106
37000.0	315.4	-80.7	15.0	-55.0	468.5	590.0	27.2	38.8	1.000104
36500.0	308.5	-80.0	18.0	-60.6	460.0	594.9	27.0	40.6	1.000103
36000.0	301.7	-81.3	1.0	-72.9	453.5	595.2	27.0	42.2	1.000101
35500.0	295.0	-82.5			445.0	591.0	27.0	42.0	1.000099
35000.0	288.0	-83.8			436.1	590.0	27.1	42.7	1.000098
34500.0	281.0	-85.1			430.7	590.5	27.0	41.3	1.000096
34000.0	275.5	-86.5			423.4	590.5	27.0	40.4	1.000094
33500.0	269.2	-87.0			416.3	594.7	27.0	40.9	1.000093
33000.0	263.1	-89.2			409.5	592.9	27.1	41.4	1.000091
32500.0	257.1	-90.6			402.5	591.1	27.3	42.1	1.000090
32000.0	251.2	-92.0			395.0	579.5	27.4	42.0	1.000088
31500.0	245.4	-92.8			388.0	570.5	27.5	43.6	1.000086
31000.0	239.7	-93.2			379.0	577.0	27.5	45.0	1.000085
30500.0	234.1	-93.2			370.0	577.0	27.4	50.7	1.000083
30000.0	228.7	-93.7			363.0	577.1	27.4	55.9	1.000081
29500.0	223.5	-94.3			355.5	570.5	27.0	61.6	1.000079
29000.0	218.1	-94.7			347.0	575.0	27.9	67.0	1.000077
28500.0	213.0	-95.0			340.2	575.5	28.1	71.1	1.000076
28000.0	208.0	-95.4			332.7	574.9	28.0	75.5	1.000074
27500.0	203.1	-95.7			325.3	574.5	28.5	80.5	1.000072
27000.0	198.3	-96.1			318.3	575.9	28.0	85.7	1.000071
26500.0	193.5	-96.7			311.5	575.2	28.7	88.4	1.000069
26000.0	189.0	-97.2			304.9	572.4	28.0	77.4	1.000068
25500.0	184.5	-97.0			298.5	571.7	28.0	75.0	1.000066
25000.0	180.1	-96.8			292.2	570.9	28.0	74.1	1.000065
24500.0	175.9	-96.0			285.0	570.4	28.5	77.2	1.000064
24000.0	171.0	-95.1			279.4	569.9	28.0	80.5	1.000062

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3912.75 FEET MSL
 15 NOV. 62 0730 HRS 1151
 ASSUMPTION NO. 105

UPPER AIR DATA

3100290105

EAST-26/HILARY

TABLE 13

Cont'd

GEODETIC COORDINATES
 32.09927 LAT DEG
 136.40591 LONG DEG

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	AIR TEMPERATURE DEGREES CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND KNOTS	WIND DIRECTION DEGREES (TN)	WIND SPEED KNOTS	INDEX OF REFRACTION
43500.0	157.5	-59.4		273.1	569.3	204.0	00.7	1.000061
44000.0	155.5	-59.0		267.0	569.1	205.0	79.6	1.000059
44500.0	153.6	-60.3		261.2	563.4	205.4	70.7	1.000058
45000.0	153.8	-61.1		255.9	567.2	205.7	78.3	1.000057
45500.0	152.3	-62.0		250.8	560.1	205.9	77.9	1.000056
46000.0	148.3	-62.7		245.5	563.2	204.6	75.6	1.000055
46500.0	144.7	-63.0		239.9	564.7	203.4	73.0	1.000053
47000.0	141.2	-63.4		234.4	569.3	202.2	70.4	1.000052
47500.0	137.7	-63.2		228.5	564.3	201.1	67.9	1.000051
48000.0	134.4	-62.6		222.4	563.3	200.0	66.0	1.000050
48500.0	131.1	-62.3		216.6	563.7	202.1	66.4	1.000048
49000.0	127.0	-62.6		211.7	563.3	203.6	66.9	1.000047
49500.0	124.4	-63.0		206.9	564.0	203.0	67.9	1.000046
50000.0	121.8	-63.3		202.2	564.3	203.4	69.0	1.000045
50500.0	118.8	-63.5		197.5	564.1	200.4	60.7	1.000044
51000.0	115.9	-63.6		192.7	564.0	200.3	68.2	1.000043
51500.0	113.1	-63.6		188.0	564.0	203.5	66.7	1.000042
52000.0	110.3	-63.6		183.5	563.9	204.0	64.4	1.000041
52500.0	107.7	-63.7		179.0	563.9	202.5	62.4	1.000040
53000.0	105.0	-63.9		174.8	563.6	200.9	60.9	1.000039
53500.0	102.4	-64.6		171.1	562.6	279.3	59.4	1.000038
54000.0	99.9	-65.3		167.5	561.7	278.5	57.8	1.000037
54500.0	97.5	-64.9		163.1	562.3	277.7	56.2	1.000036
55000.0	95.1	-64.4		158.7	562.0	277.3	54.4	1.000035
55500.0	92.8	-64.0		154.5	563.4	277.3	52.5	1.000034
56000.0	90.5	-63.6		150.4	564.0	277.4	50.9	1.000033
56500.0	88.3	-63.2		146.5	564.4	277.7	50.7	1.000033
57000.0	86.1	-63.4		143.1	564.2	278.1	50.4	1.000032
57500.0	84.0	-63.5		139.7	564.0	278.1	49.4	1.000031
58000.0	82.0	-63.7		136.4	563.0	278.0	48.2	1.000030
58500.0	80.0	-63.8		133.1	563.0	277.7	46.4	1.000030
59000.0	78.0	-64.0		130.0	563.4	276.9	43.3	1.000029
59500.0	76.1	-64.2		126.9	563.2	276.0	40.3	1.000028
60000.0	74.3	-63.8		123.0	563.7	275.3	38.9	1.000028
60500.0	72.5	-63.2		120.2	564.3	274.5	37.8	1.000027
61000.0	70.7	-62.6		117.0	563.4	273.9	37.2	1.000026
61500.0	69.0	-62.3		114.0	563.7	273.7	37.2	1.000025
62000.0	67.3	-62.3		111.2	563.7	273.4	37.3	1.000025
62500.0	65.7	-62.3		108.5	563.6	273.5	36.7	1.000024
63000.0	64.1	-62.2		105.9	563.6	273.7	35.7	1.000024

STATION ALTITUDE 3912.75 FEET MSL
15 NOV. 62 0730 HRS MST
ASLUTS-100 NO. 105

UPPER AIR DATA
3100290105
EAST-20/CHILDRY

GEODTIC COORDINATES
32.0927 LAT DEG
136.40591 LONG DEG

TABLE 13
Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM ³	SPEED OF SOUND M/SEC	WIND DATA DIRECTION (TN) SPEED KNOTS	INDEX OF REFRACTION
63000.0	62.6	-72.2		105.3	565.0	273.9	1.000023
64000.0	61.0	-72.2		100.0	565.0	274.9	1.000022
65000.0	59.6	-72.2		98.4	565.0	276.1	1.000022
66000.0	58.1	-72.2		96.0	565.0	277.3	1.000021
67000.0	56.7	-72.2		93.0	565.0	278.3	1.000021
68000.0	55.3	-72.1		91.4	565.0	279.3	1.000020
69000.0	54.0	-72.1		89.2	565.0	280.2	1.000020
70000.0	52.7	-72.1		87.0	565.0	280.7	1.000019
71000.0	51.4	-71.4		84.0	565.0	281.3	1.000019
72000.0	50.2	-69.9		82.0	565.0	282.1	1.000018
73000.0	49.0	-69.5		79.9	569.5	283.1	1.000018
74000.0	47.4	-69.2		77.9	569.9	284.3	1.000017
75000.0	46.7	-68.9		75.9	570.2	285.8	1.000017
76000.0	45.6	-68.6		74.0	570.6	287.7	1.000016
77000.0	44.5	-68.4		72.2	571.0	289.9	1.000016
78000.0	43.4	-68.3		70.4	571.0	291.4	1.000016
79000.0	42.4	-68.0		68.3	570.6	293.1	1.000015
80000.0	41.0	-68.0		67.3	570.2	293.5	1.000015
81000.0	40.4	-69.2		65.0	569.8	292.5	1.000015
82000.0	39.4	-69.5		64.3	569.4	291.7	1.000014
83000.0	38.5	-69.8		62.9	569.0	292.0	1.000014
84000.0	37.6	-69.1		61.2	570.0	292.9	1.000014
85000.0	36.7	-68.4		59.5	570.9	293.7	1.000013
86000.0	35.8	-67.6		57.9	572.0	293.3	1.000013
87000.0	35.0	-65.7		56.0	574.5	292.4	1.000012
88000.0	34.2	-64.8		54.5	575.7	291.4	1.000012
89000.0	33.4	-64.1		53.0	576.0	290.2	1.000012
90000.0	32.6	-63.4		51.7	577.5	288.8	1.000012
91000.0	31.8	-63.4		50.4	577.6	287.3	1.000011
92000.0	31.1	-63.6		49.3	577.2	287.3	1.000011
93000.0	30.4	-63.9		48.2	576.9	288.1	1.000011
94000.0	29.7	-64.0		47.1	576.7	288.9	1.000010
95000.0	29.0	-63.9		46.0	576.8	290.4	1.000010
96000.0	28.3	-63.9		45.0	576.8	292.1	1.000010
97000.0	27.6	-63.9		43.9	576.9	293.0	1.000010
98000.0	27.0	-63.8		42.9	576.9	294.0	1.000010
99000.0	26.4	-63.8		41.9	577.0	292.2	1.000009
100000.0	25.8	-63.8		40.9	577.0	290.4	1.000009
101000.0	25.2	-63.7		39.9	577.1	288.8	1.000009
102000.0	24.6	-63.7		39.0	577.1	285.5	1.000009

STATION ALTITUDE 3412.75 FEET MSL
 15 NOV. 82 0730 HRS MST
 A5005101 NO. 105

INFLER AIR DATA
 3100290100
 EAST-28/CENTRY

GEODLTIC COORDINATES
 32-09-27 LAT DEG
 136-40-591 LONG DEG

TABLE 13
 Cont'd

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUMIDITY PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION (IN) SPEED KNOTS	INDEX OF REFRACTION
053000.0	29.0	-53.6		30.1	577.2	282.5	1.000008
060000.0	28.4	-53.0		30.2	577.2	279.1	1.000008
065000.0	28.0	-53.6		30.3	577.3	277.5	1.000008
070000.0	27.4	-53.5		30.5	577.3	277.5	1.000008
075000.0	27.0	-53.4		34.0	577.5	277.5	1.000008
080000.0	26.3	-52.7		33.7	576.4	277.5	1.000008
085000.0	26.0	-52.0		32.0	579.4	277.5	1.000007
090000.0	25.4	-51.3		32.0	580.3	277.5	1.000007
095000.0	24.9	-50.6		31.1	581.2	277.5	1.000007
100000.0	24.4	-50.0		30.4	582.0	276.0	1.000007
105000.0	23.9	-49.4		29.6	582.7	275.4	1.000007
110000.0	23.6	-48.9		28.8	583.5	274.0	1.000006
115000.0	23.2	-48.3		28.1	584.2	272.0	1.000006
120000.0	22.7	-47.7		27.4	584.9	271.9	1.000006
125000.0	22.3	-47.1		26.7	585.7	271.5	1.000006
130000.0	21.8	-46.6		26.0	586.4	270.8	1.000006
135000.0	21.4	-46.7		25.5	586.2	270.7	1.000006
140000.0	21.0	-46.9		24.9	586.0	271.1	1.000006
145000.0	20.6	-47.1		24.4	585.7	271.4	1.000005
150000.0	20.2	-47.2		23.8	585.7	271.0	1.000005
155000.0	19.8	-47.2		23.3	585.6	271.7	1.000005
160000.0	19.4	-47.3		22.8	585.5	271.5	1.000005
165000.0	19.0	-47.3		22.3	585.5	271.3	1.000005
170000.0	18.6	-47.3		21.8	585.4	271.1	1.000005
175000.0	18.2	-47.4		21.3	585.4	270.9	1.000005
180000.0	17.8	-47.4		20.8	585.3	270.9	1.000005
185000.0	17.4	-47.5		20.3	585.2	270.8	1.000005
190000.0	17.0	-47.5		19.9	585.2	270.8	1.000004
195000.0	16.6	-47.6		19.4	585.1	270.8	1.000004
200000.0	16.2	-47.6		19.0	585.1	270.8	1.000004
205000.0	15.8	-47.7		18.6	585.0	270.9	1.000004
210000.0	15.4	-47.6		18.2	585.1	270.9	1.000004
215000.0	15.0	-46.9		17.7	585.0	271.0	1.000004
220000.0	14.6	-46.1		17.3	587.0	271.0	1.000004
225000.0	14.2	-45.4		16.8	587.4	271.0	1.000004
230000.0	13.8	-44.7		16.4	588.0	271.0	1.000004
235000.0	13.4	-44.0		16.0	589.0	270.9	1.000004
240000.0	13.0	-43.3		15.6	590.7	270.9	1.000003
245000.0	12.6	-42.5		15.2	591.0	271.0	1.000003
250000.0	12.2	-42.2		14.8	592.1	271.0	1.000003

STATIC ALTITUDE 3912.75 FEET MSL
15 NOV. 82 0730 UTC PST
ASCESSION NO. 105

UPPER AIR DATA
3100290100
EAST-20/CHEMIST

GEODETIC COORDINATES
32.09927 LAT DEG
136.40541 LONG DEG

TABLE 13

GEODETIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CELSIUS	REL. HUM. PERCENT	DENSITY GM/CM ³ METER	SPEED OF SOUND M/SEC	DIRECTION DEGREES (TR)	WIND DATA SPEED (KNOTS)	SHIELD KNOTS	INDEX OF REFRACTION
103500.0	9.6	-41.9		14.5	592.4	271.0	50.2	50.2	1.000003
104000.0	9.4	-41.7		14.1	592.7	271.1	50.9	50.9	1.000003
104500.0	9.2	-41.4		13.6	593.1	271.4	51.4	51.4	1.000003
105000.0	9.0	-41.1		13.5	593.4	272.0	51.7	51.7	1.000003
105500.0	8.8	-40.9		13.2	593.7	272.7	52.0	52.0	1.000003
106000.0	8.6	-40.6		12.9	594.1	273.3	52.3	52.3	1.000003
106500.0	8.4	-40.4		12.6	594.4	273.9	52.7	52.7	1.000003
107000.0	8.2	-40.1		12.3	594.7	274.5	52.2	52.2	1.000003
107500.0	8.0	-39.8		12.0	595.1	275.1	51.7	51.7	1.000003
108000.0	7.9	-39.6		11.7	595.4	275.0	51.2	51.2	1.000003
108500.0	7.7	-39.3		11.5	595.7	276.4	50.8	50.8	1.000003
109000.0	7.5	-39.1		11.2	596.1	276.0	50.5	50.5	1.000002
109500.0	7.4	-38.8		11.0	596.4	276.0	50.7	50.7	1.000002
110000.0	7.2	-38.5		10.7	596.7	276.0	50.0	50.0	1.000002
110500.0	7.0	-38.3		10.5	597.0	276.0	51.0	51.0	1.000002
111000.0	6.9	-38.2		10.2	597.2	276.0	51.1	51.1	1.000002
111500.0	6.7	-38.2		10.0	597.2				1.000002
112000.0	6.6	-38.2		9.8	597.2				1.000002
112500.0	6.5	-38.1		9.6	597.2				1.000002
113000.0	6.3	-38.1		9.4	597.2				1.000002
113500.0	6.2	-38.1		9.2	597.3				1.000002

STATION ALTITUDE 3912.75 FEET MSL
 15 009. 02 0730 1000 051
 ASCENSION 110. 105

HAZARDOUS LEVELS
 3100290105
 EAST-20/CHEMRY

GEODETIC COORDINATES
 32-09-27 LAT DEG
 136-40-41 LONG DEG

TABLE 14

PRESSURE GEOPOTENTIAL MILLIBARS	FEET	TEMPERATURE AIR DEGREES CENTIGRADE	RELATIVE HUMIDITY PERCENT	WIND DATA	
				DIRECTION DEGREES (IN)	SPEED KNOTS
650.0	5072.	2.2	41.	164.0	0.4
600.0	6675.	1.9	41.	170.5	10.1
750.0	8304.	5.5	42.	240.0	13.8
700.0	10246.	3.8	60.	250.5	22.0
650.0	12207.	0	51.	245.1	22.9
600.0	14206.	-4.3	42.	257.2	22.5
550.0	16233.	-6.8	14.	261.9	23.1
500.0	18042.	-11.3	15.	270.9	22.8
450.0	21567.	-17.3	15.	275.5	24.2
400.0	24422.	-23.0	20.	270.5	30.2
350.0	27569.	-32.1	25.	202.0	31.5
300.0	31067.	-41.6		270.0	42.3
250.0	35032.	-52.3		274.9	43.0
200.0	39727.	-55.0		280.5	43.5
175.0	42495.	-58.0		285.0	77.7
150.0	45649.	-62.5		255.5	70.9
125.0	49334.	-63.0		234.9	67.0
100.0	53324.	-65.3		270.5	57.9
80.0	58311.	-63.8		277.7	40.5
70.0	61000.	-62.3		273.0	37.2
50.0	64124.	-62.2		275.0	33.3
50.0	67826.	-50.7		282.2	20.5
40.0	72421.	-59.3		292.2	20.2
30.0	78420.	-54.0		288.4	22.9
25.0	82262.	-53.7		263.1	23.7
20.0	86983.	-50.7		277.5	19.8
15.0	93210.	-47.2		271.0	34.1
10.0	102042.	-42.4		271.0	40.8
7.0	110023.	-38.2		270.0	51.0

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

END

FILMED

2-83

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